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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/256,702 02/24/99 MATHEW

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EXAMINER

NGUYEN, D

ART UNIT

PAPER NUMBER

2871

DATE MAILED:

04/25/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

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Office Action Summary

Application No.

09/256,702

Applicant(s)

Mathew et al.

Examiner

Dung Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892) 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 16) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948) 19) ☐ Notice of Informal Patent Application (PTO-152)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 20) ☐ Other:

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DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: reference sign 609 and 904. Correction is required.

Specification

2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 9, 11 and 18 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

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Regarding claim 9, there is no teaching in the specification and drawing how a thickness of a thermal support material can be in the range of approximately 3 and 8 (mm).

Regarding claim 11, there is no teaching in the specification and drawing how spaced apart stabilizers can be prevented flow of an encapsulating material.

Regarding claim 18, there is no teaching in the specification and drawing that a cycle time for a single cell can be less than five hours.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 5, 9-10, 18 and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 5, it is unclear which part includes one of aluminum or ceramic. According to the specification, it is assumed that the containment structure is made of aluminum or ceramic.

Claim 9 recites the limitation "the thickness of the thermal support material" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim.

Claim 10 recites the limitation "thermal support material" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim.

Regarding claim 18, it is unclear what is meant by "a cycle time". For the purpose of the examination, according to the specification, it is assumed that Applicants intend to claim time

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required to package a device. In addition, it is confusing and unclear which "a single cell" is; for the purpose of examination, it is assumed that "a single cell" of claims 18 is referring to the same liquid crystal cell in based claim 14.

The term "may be" in claim 20 is a relative term which renders the claim indefinite. The term "may be" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagata et al., US Patent No. 5,880,795, in view of Miyamoto et al., US Patent No. 5,587,817.

Regarding claims 1-5, 7-14 and 19-21, Nagata et al., figure 3, disclose a liquid crystal display (LCD) device comprising:

- a containment structure (57) as claimed
- a liquid crystal display (LCD) cell including a die (52) having a pixel array (52a), a transparent plate (51) and a liquid crystal material (53);

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- an adhesive seal (54);
- a support material (36).

Nagata et al. do not disclose a plurality of spaced apart stabilizers to couple edge portions of the LCD cell. Miyamoto et al. do disclose a plurality of bars (8) couple to edge portions of an LCD cell. Therefore, it would have been obvious to one skill in the art at the time of the invention was made to couple bars to edge portions of an LCD cell as shown by Miyamoto et al. in order to support for an LCD cell (1) from the substrate (2) (col. 3, ln. 16).

Regarding claim 6, the modification to Nagata et al. device discloses the claimed invention as described above except for the Alloy Ash 42 based material for the substrate of the containment structure. It would have been obvious to one having ordinary skill in the art at to use the Alloy Ash 42 as a containment substrate material since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Regarding claims 15-18, the modification to Nagata et al. device discloses the claimed invention as described above except for wire bonding a plurality of leads from the die to a plurality of leads on the containment structure and an encapsulating material over the plurality of leads. One of ordinary skill in the art would have realized the desire to form a plurality of wire to connect from a plurality of leads on the die to a plurality of leads on the containment structure as well as to cover such wire by an encapsulating material as shown in Applicants' admitted prior art (figure 3). Therefore, it would have been obvious to one of ordinary skill in the art to form a

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connection between a plurality of leads on the die substrate and the containment structure and cover such connection thereon, since it is a common practice in the art to complete an LCD device by connecting an LCD cell to an external circuit.


Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Dung Nguyen whose telephone number is (703) 305-0423. The fax phone number for this Group is (703) 308-7722.

Any information of a general nature or relating to the status of this application should be directed to the group receptionist whose telephone number is (703) 308-0956.

DN
04/21/2001


William L. Sikes
Supervisory Patent Examiner
Group 2871